Working Group 8
Baitfish, Cool Water Ornamentals and Koi
March 29 – 30, 2005
Memphis, TN

Participants:
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Introductions:

Introduction of participants and overview of the national aquatic animal health plan.

Charges for work group 8:

Overview of charges for work group 8: providing input on various elements including health, certification/control/eradication programs; diseases of importance; facilitating commerce; emergency response and planning, etc.

Approval of agenda.

Baitfish – 90% of farm-raised production in Arkansas. BMPs developed with UAPB. Wild bait issue: 60-70% of baitfish moved and sold are wild. Many come from areas where SVC has been found. Farm-raised Arkansas industry wants protection from introduction. They are certified and wild baitfish may be sold as "certified" and from "Arkansas", when they are not (and potentially introduce disease). Fish and wildlife service could step in and prevent movement of baitfish, but it's a State's rights issue. Part of the plan could be certification that would have an "official" seal showing you participate in surveillance, etc. Part of a program could involve being part of a program to allow for movement across State lines. Also, the Plan should serve as a template to "harmonize" State import requirements.

Baitfish industry following OIE guidelines for certification, but APHIS is not endorsing interstate movement certificates – but industry would like this in order to differentiate between industries doing appropriate testing and those who just say they are doing the testing.

Traditionally, agriculture has not been involved with aquaculture and providing cooperative programs available to aquaculture industries. For some livestock programs, APHIS encourages State participation in incorporating minimal guidelines by providing Federal funding for those States that participate in the program.

Part of country of origin labeling (COOL) is a food safety issue, but also has labeling requirements. This component could be valuable for baitfish in terms of differentiating between farmed versus wild.

Model document and program, consumer education are steps that industry could begin working on. Risk documents showing that farmed bait are less risky than wild caught bait of unknown health status.

Six billion fish shipped from farms in Arkansas. Third largest aquaculture industry in the U.S. is baitfish.

The key to whatever program is developed will depend on definitions of "farmed" and "wild".

A lot of live Canadian bait comes into the U.S. USFWS allows baitfish to come into the U.S. but we cannot ship into Canada.

Tropical industry is both farm-raised and wild-caught as well.

Equivalency – foreign countries that will issue a certificate that may or may not be meaningful.

Product sent from distribution centers may be difficult to determine the true country of origin and this is a challenge for importing.

KHV – how can industry be protected when distribution to the 50 States can occur within days.

Hundreds and thousands of boxes of ornamentals brought in with no health certification unless they require a CITES permit. Potential for bringing in diseases with the mixture of wild and farm-raised from all over the world.

A risk assessment still needs to be conducted to determine the risk of introduction of disease and non-natives by import of these tropical fish. The EU has regulations governing tropical fish but the U.S. does not. Part of the reason why we don't have requirements is that APHIS did not have authority over health for farm-raised animals (including aquatics), which includes wild where it can affect our farm-raised animals, until 2002.

The baitfish industry reinforced that the importation of tropical and cool water ornamentals should be closely looked at and that fish are coming in with incurable diseases that are making retailers gun shy.

We need to continue to look forward to get where we need to be. Other animal commodities have had programs in place for, in some cases, 100 years or more. Aquatics is a new area and it needs to catch up and move ahead.

Tropical industry certification has primarily been focused on visual inspection. Often we can't meet export requirements of other countries because we don't have programs in place.

Certificates from other countries can be meaningless (this is where APHIS audit of foreign competent authorities is important).

Review of Case Studies:

ISA and SVC programs. Overview of APHIS eradication programs for ISA and SVC.

Surveillance-supported SVC-free or positive zones are probably in the UK and Australia.

Internet purchases are a potential risk. Small businesses shipping in fish from overseas that may not be "responsible" importers. Training of our employees to know what they are looking for – putting the infrastructure in place.

Entire catchment area would be positive for a disease if it was found in animals and movement in the catchment is not restricted.

Wild fish survey is an opportunistic survey – not targeted. APHIS will be requesting that FWS step up surveillance for SVC and more comprehensive. Fish kills represent a good opportunity for surveillance.

Review of disease list as it pertains to baitfish, cool water ornamentals and koi

OIE reportable diseases (reportable but not necessarily program diseases – RAADs).

Program diseases (both reportable and we want to do something about (control, surveillance, eradication? – PAADs).

Review criteria in draft chapter 4 (Tab 5, page 5).

Diseases that potentially can affect baitfish, cool water ornamentals and koi:

SVC

Include a list of susceptible species for each disease (as suggested at tropical fish group).

Do we need to add or subtract to this list?

Often times there are diseases that aren't problematic until it's already come into the country.

Most of the diseases on the list don't matter to this industry except for SVC.

What is the perspective on koi herpes virus? Probably kills more fish and affects the economy more than SVC. KHV is very species-specific. Most people would not want it on their farms.

Koi clubs of America have expressed concern about KHV as well.

How is the certification going to be done? Overall farm-based testing is more meaningful than visual testing and lot testing for this industry. Lets not do something that means nothing. Provide leadership so that certification is meaningful for the disease it's being tested for.

One country has a protocol for exposing fish to KHV and "immunizing" them – marketed as "super healthy", but really a violation of live vaccination laws and animals are then carriers (Israel).

In Florida, the hobbyists are practicing more "risky behaviors" and are more affected by KHV than producers. KHV may not only be an animal health issue but also a consumer education issue.

Koi Clubs of America are very interested in animal id as well as a means of tracing back infected animals.

KHV certification may be able to be done, but samples of all moribund fish would have to be done as well as sampling at the right time/temperature and would have to be done on a farm, and not lot, level.

There are wild outbreaks in the US of KHV. If there was a good national standard for what it would take to be KHV, it could be worth doing. Number 3 criteria is met for KHV and we need to do more research before embarking on a certification program. We should take the issue off the table.

SVC would remain on the list in one form or another (eradication, certification, etc.). KHV is not at a stage to be included as a program – requires more research.

BREAK FOR LUNCH

Zonation

Farms in Arkansas and Missouri that are on protected water sources could be disease-free zones.

Catching wild bait and holding them in ponds would not qualify as a "farm" by NAAHP standards, even though in Minnesota and other northern States do qualify wild caught-held fish as "farmed".

The definition of "Farm-raised" and "biosecure" are important.

Minor cost providing animals for surveillance, so testing fewer animals wouldn't be a big issue. However, if we can declare farm-raised fish in Arkansas as free –eventually, not every farm would have to be tested every year. Could reduce costs by reducing testing burden.

What about farms in areas where temperatures are not conducive to detecting SVC? Could still be carriers – however if the farms are biosecure, multiple generations could have been born and would be free. But there is no example of declaring freedom without testing animals for the pathogen.

Can't trust that every farm would be willing to be participate, so individual farms want to secure their status as disease-free. Semi-annual, once in spring and once in fall when temperatures don't exceed 72 degrees Fahrenheit. 18,000 acres have been doing this surveillance for two years and another 1,000 acres (almost 2,000) to be added this year. 150 fish per farm and in the course of 2 years all ponds on a farm will have been tested.

The major producers are involved in the surveillance. It's mostly smaller farms that are not involved in surveillance.

What is the cost of the industry to do this testing? Lab diagnostic fees, fish pathologist and veterinarian fees (2,000 – 3,000 a year), plus costs of labor to catch the fish for testing.

New fish are in general, not being added to the farms. In theory, a certified fish could be added if it's at the same or higher level per OIE standards. Industry does not want to lower the number of fish tested to 30 – especially since the numbers of fish on a site are large.

1300 cases are examined by the extension agencies alone. In house testing is done as well. Every pond (in one farm) is put under the microscope every 30 days. Good in-house testing and surveillance. Monitoring is important for size as well, and health is considered as part of that monitoring.

Golden shiners, fathead minnows (two varieties), gold fish, koi = species being grown.

Certification needed to legitimize what the industry is doing. Industry is spending the money to meet OIE standards, and other segments are doing one test and making the assertion that they are tested to the same level. Industry would like to see a national program and a "seal" associated with participation in the national program.

There is no export industry but interstate. There is the potential for an export market. Incorporating the current surveillance program into a national program could be done easily, but need to have a national program in place for domestic movement, not only international. People are using test results as a certificate, which can be generated and are not necessarily meaningful because of a lacking program.

There has to be a way to ensure that a lot of fish doesn't have the ability to use the certificate for other fish its commingling with.

If State's adopt the Federal NAAHP baseline then it could be advantageous for the commercial stock to be certified.

Mandating a minimum bar for interstate movement would be helpful in resolving many of the industry issues.

Stop the flow of Canadian bait into the U.S. since they are not accepting our bait. Issue to be discussed with the Canadians.

Industry needs a Federally-produced certificate to verify the work being done to prove disease freedom.

Arkansas and Louisiana are the two largest farm-raised bait producers. Wild bait is produced in pockets everywhere – particularly the Great Lakes area. There are also pockets in Oklahoma and Texas and other areas.

Baitfish harvest isn't really an ecological advantage since the game fish feed on them. Hundreds of people in the business of commerce of these baitfish.

We couldn't stop the movement intra-State, but could control inter-State. There are more people involved in wild baitfish industry than in the farmed baitfish industry.

SVC issue: taking wild baitfish from cool water areas and moving them to warm water areas-a high risk activity for SVC.

If SVC is important in terms of protecting wild naïve fish from the disease, then using wild-caught baitfish can be a high risk activity. It would make sense to use non-contaminated bait from a farm-raised certified stock.

In summary: this industry could benefit from a certification program that would allow for safe inter-State and potential international commerce and also protect wild resources by ensuring that baitfish are coming from SVC-free certified sources. Need to control the

movement of wild uncertified bait and also need to ensure that certification is meaningful and can't be transferred to non-certified source piggy-backing on the true-certified fish.

If a Federal certification program is to be put in place, we MUST have electronic certification.

Cost of the certificate would be an issue. Domestic program certificates should be fee-free as user fees are only applicable to export certificates.

Why would we need to issue a new certificate for every shipment when the status has remained the same. Washington State issued blanket certificates good for one year – this could be an option. Are there penalties for not abiding by the requirements? No but bad for business – if they ship bad product no body will want to buy from you again and ruin business. Cuts down paperwork and is cost effective. An idea to investigate.

APHIS-accredited veterinarians are collecting the samples. Andy is an APHIS approved lab is doing the testing. Coordinating use of veterinarian to be cost-effective!

Disease Prevention Measures

State programs: Arkansas does not have health requirements for aquatics coming into the State, with the exception of trout. There is no list of diseases of concern. There is a list of approved species, from an exotic – species introduction point of view. Industry is learning to fill in the gaps – but industry may want a State requirement for importation. In Florida, the Department of Agriculture has best management practices – requires that mollusks and crustaceans are certified disease-free (using a list similar to OIE). There is no list for fish.

Game fish – up and coming industry that collects wild brood stock of unknown origin.

Arkansas has health requirements for crustaceans via permit required for growing shrimp.

Industry has BMPs for effluents, HACCP for biosecurity on farms. Zebra mussel requirements for shipping to some States. Requirements for equipment and animals (not to be moved off farm or exposed to wild or uncertified stocks).

Quarantine: difficult.

Do birds and turtles, etc. move disease. It's possible but not probable. The UK is a good example of certified farms surrounded by SVC in natural bodies of water. Farms remain free as long as biosecurity is good. Not possible to use bird netting on a 20 acre pond. Permits for bird depradation, such as cormerants. Keeping birds off ponds is a large cost to the industry – 70,000 a year to keep birds under control. 400,000 cost on one farm. The cost is large but can be more costly if birds left unattended to. If fish go beyond market size, have to grow to even larger size and sell to bass folks. The smaller fish are

key to being a profitable business. Density-dependent factors important to keep the size right.

Ornamentals – bird issue is not a density issue but value issue! If you have a large fish worth $15 per lb., you're losing money.

Industry has a brochure about biosecurity. A certification program is being implemented via the State including protocols. Includes detailed information. Currently seeking authorization and details would come later. Industry has put forward this propos – producer driven – via the Plant Board (Arkansas Dept. of Agriculture). This would be a voluntary certification program. It would be fee-based with penalties for mis-representation. There will be a logo attached with the program. It is set up to be similar to a certified seed-program. It's the type of program industry would like to see APHIS administer. Hopefully other States will recognize the program and possibly serve as a model. It's also being done as a way to promote product.

There are over 4,000 legal statues that affect Arkansas baitfish industry re: interstate commerce.

Encourage farmers to sign on to biosecurity and also BMPS for effluents.

What is the timeline in developing this plan? Many elements have already been written, just need to have it recognized.

Arkansas certification for bait and ornamental fish – the name of the program once implemented. "Safe bait from the natural State". Only 10% percent of commercially raised baitfish are outside of Arkansas and no other similar programs are known in other States. Louisiana is the next larger producer.

UAPB has been an advocate for BMPs and other preventative programs.

Distribution from farms? Mostly an export industry – 6 billion fish leave the State annually. Very little wild product goes into Arkansas.

Wild bait: MN, WI, Iowa, Great Lake States, South Dakota, Texas, Oklahoma.

Big wholesalers may get shipments of wild and farmed and sell/redistribute to shops. Baitfish leaving Arkansas may go to all States.

It's difficult to be a "true" grower in northern States due to water temperatures being too low.

Small wholesalers also claim to be "farms", but if they're doing $500,000 in business, they are distributors and not true farmers. You couldn't grow baitfish in northern climates in one season – you would need two seasons.

Most mountain States don't allow bait due to trout disease concern! Baitfish industry is also testing for IPN, VHS, and IHN!

Protocols to prevent movement of disease from one premise to another? Is this covered by BMPs? If short of one particular size, may buy from another producer, but not to go in the pond; they go straight to the wholesaler/market. The producers that participate in the certification program are not willing to risk introducing fish of a lower health status (must be certified).

Industry used to isolate new stock on separate ponds/farms (practiced 20 years ago), but have moved to certification or no introduction. Not only issue due to SVC but fear of introduction of anchor worm – devastating even though it's not a reportable disease, but economically a problem. Industry has spent a lot of time eliminating diseases and don't want to risk any new introductions. Sterilize pond – dessication, and sterilize eggs in hatchery. Pond bottoms may be limed additionally.

Unsafe hatchery or production practices that industry worries about? State raises game fish using wild brood, hatch and then stock back into the wild. Fish being removed from Mississippi and placed in natural bodies of water to feed game fish. These bodies of water might be areas where wild baitfish are caught and then moved. Industry feels secure from State practices due to industry's own BMPs.
Partnerships with State fish and wildlife agencies needs to be enhanced in order to implement baseline guidelines effectively.

Maine is an example where Inland Fisheries, Marine Resources, Agriculture and the Federal agencies have all cooperated.

Maine does not allow importation of baitfish. Should be able to import certified bait fish. Live bait is allowed as long as it's captured in the State. You can't import it regardless of certification. If introduction of baitfish is prevented due to animal health issues with no justification, that would be a situation that should be remedied. There is no reason why a certified baitfish should not be allowed in a State for animal health reasons (there may be other justifications).

END DAY ONE

Recap of day one discussions.

Comments on previous days discussions:

Do not understand the impact of wild caught ornamentals – including ornamentals. Water released from imported shipments, destination of products, etc. A true risk assessment needs to be undertaken to understand what the true risk of introduction of disease is.

Fish don't all end up in aquaria, they may end up in backyard ponds that drain to natural waterways. What is the risk?

Risk assessments include environmental, economic, social aspects.

KHV – what does it take to create a reliable test? As a latent virus, the only test that could detect the virus is using a DNA test, and using the best technology available, the virus can only be tested 4 months after exposure. Another possibility is to develop a test looking for antibodies against KHV. Channel catfish virus, a related herpes virus, can be detected indefinitely in some fish. Many international groups are investigating diagnostics.

Country of origin labeling definition of farm-raised: different than the definition currently in the NAAHP. The current COOL definition is raised and harvested in captivity. From a health standpoint, you have to know the entire life cycle to be able to make a determination of health status. How could you make an accurate determination if the animal is only raised and harvested?

How will we address farmers collecting wild seed for oysters and growing them out vs. baitfish that are wild caught and held for grow-out? We may need a specific definition for farmed vs. wild baitfish (stages of lifecycle to be included). Baitfish and ornamentals that are farm-raised, should by definition have spent their entire lifecycle on a farm.

Guidance for animals that are born and raised on the farm vs. collected then raised on the farm.

If there is a mixture of farmed and wild fish on a premise, they should be considered wild.

Some of the larger tropical wholesalers intend on establishing biosecure facilities to hold koi and goldfish that would include treatment of influent and effluent water.

Many sources of ornamentals in the far east grow fish as a second source of income. Prior to being sold, the fish are brought together at a holding facility.

Process of certifying our own domestic animals and having "safe" movements of animals domestically in order to be able to enforce "safe" movements into our country.

Certification should either be real and legitimate or not in place at all.

Discussion on trade and fairness, evaluation of foreign competent authorities and moving forward to get to where we need to be. Terrestrial animals have had programs in place for 50 years or more and we are just starting with aquaculture. We have much to learn from terrestrial models that will allow us to move forward more quickly, recognizing it will still take time to get to where we need to be.

Model Health Certificate

Do we need a separate certificate for each species when certification should be for the farm, not each individual species? The species should be separately boxed, and you could have a separate certificate for each one. The UK certificate is based on the OIE and allows for multiple species in one shipment – so one certificate per shipment.

Recognize farm vs. wholesaler, both of whom may need a certificate. We may need a certificate that allows for multiple species. You could have multiple sources of one species, but you may need the test results to accompany the certificate if requested.

Since the certificate is based on the farm of origin, it should be possible to have one certificate for multiple species since the certification is farm-based. There has to be a clear chain of custody for certification of animals from one facility with multiple sources to be meaningful.

We need to investigate whether or not there can be penalties for misrepresentation of a health certificate. There should be a penalty/fine for misrepresentation.

You can't police everyone, but there are fines associated with violating regulations associated with other Federal agencies. This helps keep the system honest.

Health certificate: asking for information about where the animals were born and raised. Asks for GPS coordinates for destination but not for origin! Different certificate for a wholesaler versus a farm may be necessary.

For terrestrial animals moving in lots, they tend to originate from one company, so health status is the same. The wholesaler issue seems unique to aquatics. Blanket permit system for pet birds in Maine. The blank permit owners are not monitored by the State, it's only used in a situation where a traceback needs to be conducted to find out where the birds came from. It is a permit, not a health certificate.

Cattle example: if cattle going into a live market have certificates, a new certificate can be issued based on the original multiple certificates.

Protecting farms not an issue: it's being done. The issue is protecting markets and farm reputation.

How do we make the system work to apply to wholesalers? Answer could be a farm versus wholesaler certificate. At the receiving end, how do you know which one applies and whether or not a shipment is completely certified? Example: if you purchase from a wholesaler, you should not need to know who their sources are. The wholesaler should be certified based on only selling certified animals, regardless of their source. It's the same as in the food industry. US grade beef: we don't know where it comes from: you trust the processing plant purchases from certified sources.

If you're going to call yourself certified, it would have to raise the bar of certification: all sources would have to be certified in order for the wholesaler/distributor to be certified. You wouldn't need to know who the sources are unless there is a problem.

Should be an SVC program at both the farm and wholesale level to ensure that all susceptible product is clean – if the point of the program is to ensure safe movement of animals whether internationally or domestically.

Eradication, Insurance & Indemnity

If it's not cheap, you can't afford it. It's difficult to ensure a product you can't see. Probably disaster-oriented insurance is the only feasible coverage. Don't want to ensure for poor management practices. SVC was a discussion – if there is mandated destruction of stocks, maybe insurance has a role here. Policy would probably be written in such a way that you have to adhere to certain management practices.

Management is everything in baitfish, and we don't want to reward people for poor management.

Baitfish association of growers has a voluntary fee check-off program (approx. 20% participation) to cover other costs – it's difficult to collect these fees and therefore it is unlikely industry would self-tax to go in a fund to help make up for indemnity.

Like many other States, Arkansas is broke and probably can't come up with the matching funds for indemnity.

Insurance: if it's hard to recoup money, the policy might be cheap enough to afford for a major disaster.

Crop failure insurance – 80% loss in over 50% of the industry – requirements for qualifying for payouts. The flood of 1987 is the only disaster in recent history that would probably qualify for an insurance pay-out as it is being designed.

Again – probably only disasters would be the kind of coverage industry could afford to have. In all likelihood they would pay into a policy that you would never need.

Row-crop type insurance only rewards poor management, and the baitfish industry doesn't want to reward poor management.

If we're going to kill fish, indemnity has to be a component. If we have import and interstate requirements due to SVC and a positive premise means you can't move fish, then industry wants to eradicate stocks and have indemnity.

Indemnity value differences: salmon have meat value (salvage), and indemnity value based on time in production minus any salvage value. For SVC, have to consider type of fish (fancy koi –Asian collector vs. domestic type fish vs. common carp) – valuation is

made in different ways. Looking at invoices and market factors can also be included in a valuation.

How negotiable is the 50% valuation? This came down from the Office of Management and Business (OMB).

The plan is going to have to be broken down in to species-specific sections, including definitions.

The Arkansas certification plan could be adopted into the plan rather than re-inventing the wheel. There may be some segments of the industry that may not even be included in the NAAHP. Therefore it may be best to have individual NAAHPs for the different segments – similar to what has been done to animal i.d. and EPA effluents.

To avoid having all ponds depopulated, must show biosecurity between farms sites.

There needs to be a very specific plan worked out so that the speed of action happens much more quickly to minimize impact on business. A uniform plan of action needs to be developed based on our SVC experiences to date. Get the education over with before the disaster occurs.

We don't need to wait for the NAAHP to move forward with plans that are already ready to go.

Example of foot and mouth disease of dairy farmer who also bottles milk. He had a business plan that provided for staying in business should he get FMD – buy milk from elsewhere and continue to bottle to stay in business.

Contingency/Emergency Planning

SART/DART/CART in Florida- Kathleen Hartman

Contingency guidelines in the event a farm has an SVC incident including what decisions will need to be made and who makes the decision. Water release issues, carcass disposal, etc.

State Agricultural and Animal Response Team (District & County).

Hurricanes in Florida – addressed aquaculture issues including preparing farms for natural disasters, disease disasters, etc.

Workshops being put together around the State to have training sessions for veterinarian, producers and all interested parties. Emergency management and preparation: www.flsart.org

Scenario/tabletop exercises to help identify risky management practices, implementing appropriate biosecurity, etc.

Tabletop exercise – Don Hoenig

Homeland Security Presidential Directive #9 and #7 regarding protection of agriculture and food sources. Following FMD outbreak in England coupled with 9/11 and inception of emergency management agencies – emergency preparedness is a top priority.

Exercise in New England – 3-day long drill. State/Federal emergency response. Activated emergency response team. Modeled on the incident command system (originally developed by the Forest Service). The test exercise identified gaps in the emergency response plan.

Quebec, Ottawa, New Hampshire, etc. were also included in the exercise.

Voluntary electric cut-off when temperatures get above certain level. Industry has learned to manage around the natural environmental/disaster issues they have to face. Power outages, thunder storms, tornadoes, ice storms are all issues this industry has to deal with.

SART/CART/DARTs and contingency plans are something industry can consider. SVC is the real emergency that industry is concerned about. Quick reaction time is important as well as an easy way to valuate the fish and QUICKLY.

We need a plan for valuation and for SVC it could be a per acre value, for example (for baitfish).

The more industry has researched their State agencies and how they would react to an SVC incident, as well as how industry could be prepared to assist in an eradication effort to make things go more smoothly and more quickly, the better in terms of a faster reaction time!

END OF MEETING

<u>Feedback from participants:</u>

-- Overall, high points were given for the workshop organization, effectiveness of facilitators, and meeting facilities.
-- Most participants supported the concept of the working group and the amount of time devoted to the working group discussions.